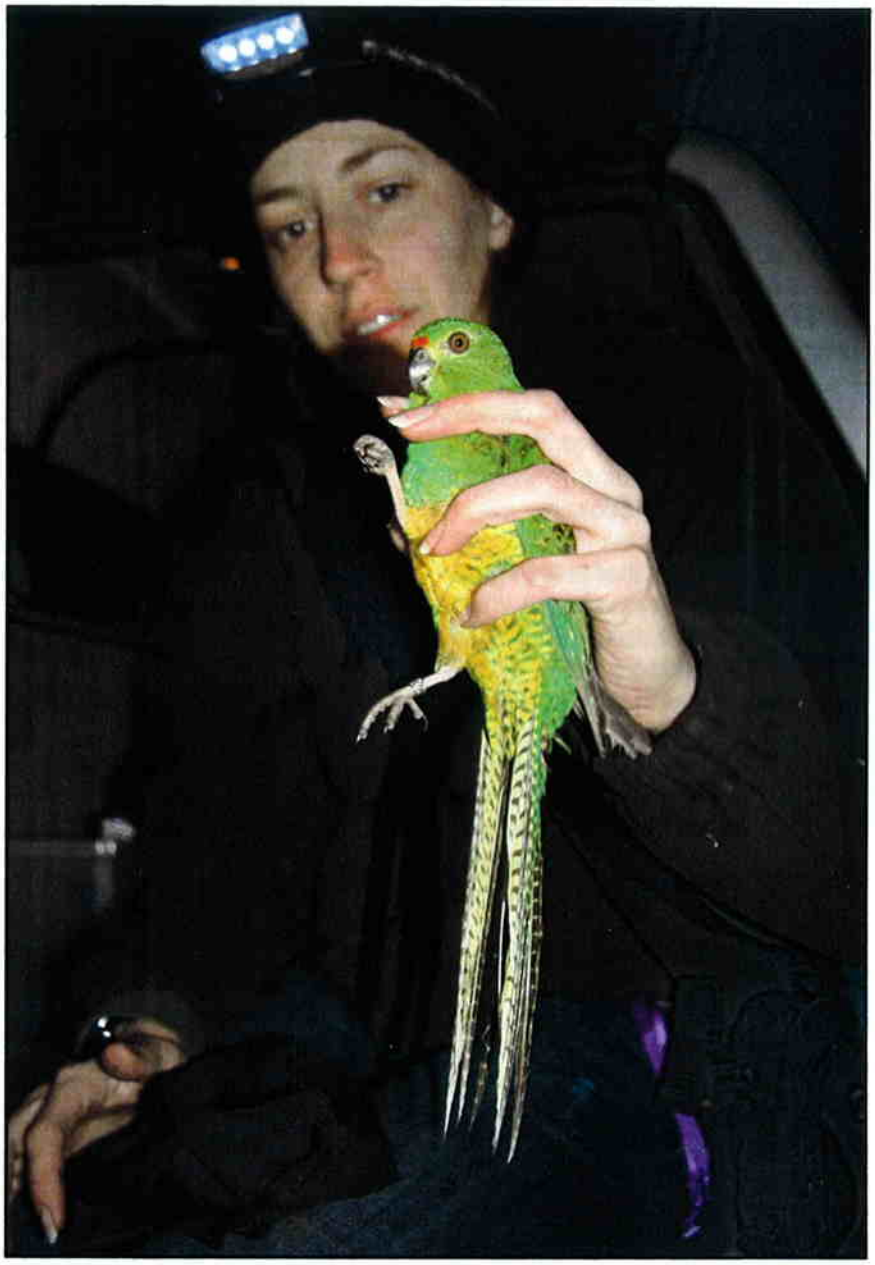
Radio-tracking Western Ground Parrots in Cape Arid

After the annual population monitoring of the Western Ground Parrot in the first half of the year, it is to the breeding season we turn our attention in late winter / early spring. There is potentially much more to be learnt at this time, especially as our understanding of ground parrot breeding ecology continues to raise more questions than answers. The Holy Grail of our research would be the finding of a nest - astonishingly something not achieved since 1913.

To meet this end we would have to capture birds (including at least one breeding female) and attach radio transmitters. One of the females could then be carefully tracked to the vicinity of a nest. Once the nest had been located a remote surveillance video camera could be installed at the nest entrance and, with a little bit of luck, never-before-seen parent / chick activity recorded. It all sounded quite easy in theory!

As a sub plot to the nest search and breeding behaviour, birds fitted with transmitters could be monitored away from the nest site to reveal other facets of their secretive lives. How extensive is their home range? To what extent are they territorial? How do they divide up their time amongst vegetation of different age and structure? How do they divide up their time resting / feeding / moving etc.

After several days of listening we were able to hone in on one pair. Ground parrots fly in and out of their roost site at dawn and dusk and rarely so at other times. So these windows of time represent the best chance of capture. Our first attempt was on Monday evening on the 18th August 2008. We set up a line of mist nets, 150 metres long and sat patiently in the fading light. I wondered how long, if at all, it would take to get a bird in the hand. Then suddenly my train of thought was interrupted. There was a brief commotion, a shout of "I've got one!" and, through the gloom, a silhouetted Abby huddled around the net with her hands clasped around.....!



Abby Berryman with Ramsey on the first night of capture attempts. *Photo: Arthur Ferguson*

Somewhat in shock the three of us managed to come to our senses as we quickly became aware of how precious our quarry was. We set about "processing" the bird as sensitively and efficiently as we could. We collected loose feathers so they could be sent away for genetic testing. The genetics work would help us determine, after years of geographical isolation,

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how significant the genetic variation was between Western and Eastern Ground Parrots. We took blood and cloacal samples to assess the general health of the individual as well as testing for Chlamydia, a common and highly infectious disease in the parrot world. The bird was weighed and measured and fitted with a band and a 2 gram transmitter. We kept the bird (now called "Ramsay") overnight to release in daylight the next morning.

After release we were able to pick up Ramsay's signal immediately. Several moments later we witnessed him fly northwards some 60 metres seemingly unencumbered by the transmitter and none the worse for his "ordeal". We didn't really know what to expect in terms of the area we would be covering for radio-tracking. Hopefully we would be watching a wild, Western Ground Parrot at close quarters on a regular basis and learn invaluable information about its feeding, breeding and daily routine.

The reality however was quite different. We hardly ever saw Ramsay. We spotted him only once or twice on the ground. And yet sometimes from the strength of the signal he appeared to be only several metres away. Despite this close proximity he would remain undetected - testament to his superb camouflage, stealth like movement through the low heath and habit of taking long naps in the day!

More often, but yet again all too rarely, we would see Ramsay in flight. He would appear as a silhouette in the twilight of dawn or dusk moving between roosting and feeding sites which are 100-800 metres apart. Or sometimes he would fly during the day to feed the female in response to her begging 'scree' calls. From what we could observe she rarely seemed to move from the long unburnt vegetation indicating that her nest was in this area.

During a day's radio tracking Ramsay would often cover an area of no more than 3 to 4 hectares. Every half an hour we would triangulate his position for a more accurate location. Often he would remain in the same spot for several hours - the result of a rich feeding area or a safe haven for resting. He did not seem to display any territorial behaviour but perhaps this was due, in part, to few other Ground Parrots competing in the area.

Unfortunately this research had a rather abrupt end. It was on the morning of the 7th September that we found Ramsay's remains: one wing and many feathers atop a *Dryandra* shrub. This was certainly the work of a raptor and quite possibly a Brown Falcon as three of them were observed acting quite boisterously in the vicinity the day before. The significance of predation by native animals on Ground Parrots is unknown but highlights the impact of multiple threats (however significant each threat is individually) on a critically low number of birds.

Over the course of the 5 weeks we learnt a lot about the process of Ground Parrot capture and radio tracking work as well as enhancing knowledge and understanding of behaviour and habitat requirement. Buoyed on by this success we hope to undertake similar exercises in the future. These will further inform our planning and management for species conservation and support the long term survival of one of Australia's most cryptic and specialized birds.

Jeff Pinder

Examining the tail of 'Ramsay' the radio-tracked Western Ground Parrot. Look closely to see the transmitter attached to the tail. ***Photo: Arthur Ferguson***